

CLAIMS

Claim 1. A modular electrical power system comprising:

a housing having a plurality of electrical conductors extending therethrough;

said housing defining at least four ports therein;

at least four circuit modules removably receivable in said ports of said housing;

each of said circuit modules adapted to engage a different combination of said electrical conductors in said housing for defining a different predetermined electrical circuit;

wherein said modular power system simultaneously provides, at the selection of the user, one, two, three or four of said different predetermined electrical circuits.

Claim 2. The system as claimed in Claim 1, wherein each of said circuit modules is removably receivable in any one of said ports defined in said housing.

Claim 3. The system as claimed in Claim 1, wherein said plurality of electrical conductors extending through said housing comprises at least eight electrical conductors.

Claim 4. The system as claimed in Claim 3 wherein said at least eight electrical conductors comprise at least four live electrical conductors, two neutral electrical conductors, and two ground electrical conductors.

Claim 5. The system as claimed in Claim 4 wherein two of said four predetermined electrical circuits are each formed from a different one of said live electrical conductors, a first neutral conductor shared by said two predetermined electrical circuits, and a first ground conductor shared by said two predetermined electrical circuits.

Claim 6. The system as claimed in Claim 5 wherein two other of said four predetermined electrical circuits are each formed from a different one of said live electrical conductors, a second neutral conductor shared by said two other predetermined electrical circuits, and a second ground conductor shared by said two other predetermined electrical circuits.

Claim 7. The system as claimed in Claim 4 wherein said at least eight electrical conductors extend longitudinally through said housing.

Claim 8. The system as claimed in Claim 4, wherein said at least eight electrical conductors are arranged sequentially in said housing, from top to bottom, as follows:

a first live conductor, one of said ground conductors, another of said ground conductors, one of said neutral conductors, another of said neutral conductors, a second live conductor, a third live conductor, and a fourth live conductor.

Claim 9. The system as claimed in Claim 4 wherein said eight electrical conductors are arranged in said housing such that one of said live electrical conductors is separated from each of said other three live electrical conductors by at least four of said other electrical conductors.

Claim 10. The system as claimed in Claim 4 wherein at least one of said four predetermined electrical circuits is formed from a first one of said live conductors, a first said ground conductor, and a first said neutral conductor.

Claim 11. The system as claimed in Claim 10 wherein each of said other three predetermined electrical circuits is formed from a different one of said live electrical conductors, a second said ground conductor shared by said other three predetermined electrical circuits, and a second said neutral conductor shared by said other three predetermined electrical circuits.

Claim 12. A modular electrical power system comprising:

a housing having a plurality of electrical conductors extending therethrough;

said housing defining at least four ports therein, each of said ports adapted to removably receive a circuit module defining a different predetermined electrical circuit such that said power system is capable of simultaneously providing, at the selection of the user, a maximum of at least four different predetermined electrical circuits;

said plurality of electrical conductors comprising at least four live conductors, two neutral conductors, and two ground conductors.

Claim 13. The system as claimed in Claim 12 wherein said plurality of electrical conductors are arranged in said power block such that two of said different predetermined electrical circuits are each formed by a different one of said live electrical conductors, a first said ground electrical conductor shared by said two predetermined electrical circuits, and a first said neutral electrical conductor shared by said two predetermined electrical circuits.

Claim 14. The system as claimed in Claim 13 wherein two other of said predetermined electrical circuits are each formed by two different said live electrical conductors, a second said ground conductor shared by said two other predetermined electrical circuits, and a second said neutral conductor shared by said two other predetermined electrical circuits.

Claim 15. The system as claimed in Claim 12 where one of said different predetermined electrical circuits is formed from one of said live electrical conductors, a first said neutral electrical conductor, and a first said ground electrical conductor.

Claim 16. The system as claimed in Claim 15 wherein three other of said different predetermined electrical circuits are each formed from a different one of said live electrical conductors, a second said ground electrical conductor shared by said three other predetermined electrical circuits, and a second said neutral electrical conductor shared by said three other predetermined electrical circuits.

Claim 17. A modular electrical power system comprising:

a housing having at least eight electrical conductors extending therethrough;

said eight electrical conductors comprising four live electrical conductors, two neutral electrical conductors, and two ground electrical conductors;

said electrical conductors adapted to define at least four different predetermined electrical circuits;

two of said predetermined electrical circuits each being formed from a different one of said live electrical conductors, a first said ground conductor shared by said two predetermined electrical circuits, and a first said neutral conductor shared by said two predetermined electrical circuits;

two other of said predetermined electrical circuits each being formed from a different one of said live electrical conductors, a second said ground conductor shared by said two other predetermined electrical circuits, and a second said neutral conductor shared by said two other predetermined electrical circuits;

said housing defining at least one port for removably receiving at least one circuit module for defining at least one of said four different predetermined electrical circuits.

Claim 18. The system as claimed in Claim 17 wherein said housing defines a plurality of ports.

Claim 19. The system as claimed in Claim 18 further including a plurality of circuit modules removably receivable in said plurality of ports for simultaneously providing, at the selection of a user, a plurality of said different predetermined electrical circuits.

Claim 20. The system as claimed in Claim 19 wherein each of said plurality of circuit modules is removably receivable in any one of said plurality of ports.